



Joint CPUC-CEC Workshop on Southern CA Infrastructure Issues Resulting from SONGS Closure



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Introduction: CPUC Procurement

- Ensure that the investor-owned utilities (SCE, SDG&E and PG&E) maintain electric reliability on behalf of customers
- Evaluate the need for new resources to meet local area and system reliability needs in the Long-Term Procurement Plan Proceeding (LTPP)
- Balance several factors: safety, reliability, ratepayer cost, and state environmental goals





Introduction: CPUC Procurement

- Recent LTPP decisions have authorized resources to replace OTC units
- The current LTPP is evaluating reliability needs without SONGS
- CPUC expects preferred resources to play a key role in meeting these needs





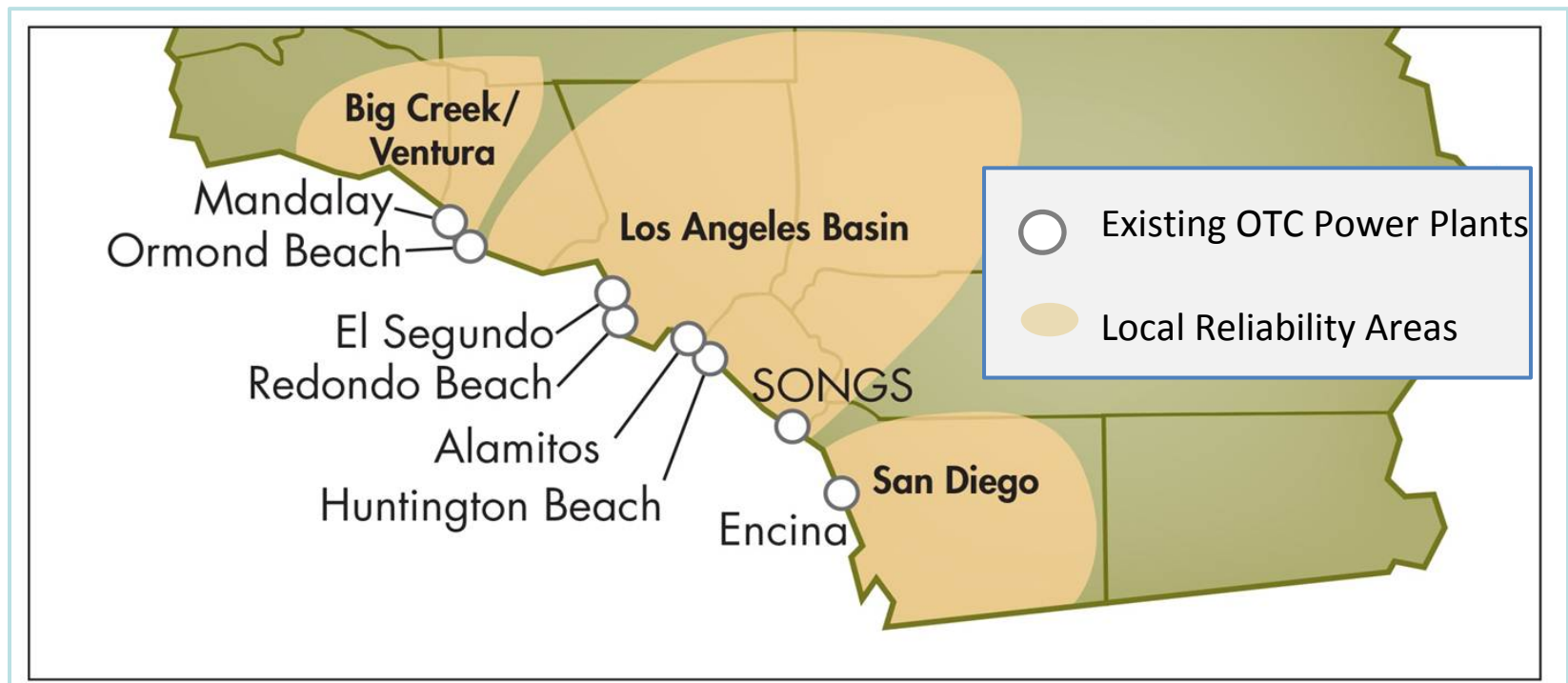
CPUC & OTC Replacement

- Over the last several years, the CPUC has been authorizing new resources to replace OTC units
- In 2013, over 1800 MW of new resources came online in the LA Basin local area
- Also this year, the CPUC authorized additional resources in Big Creek/Ventura, LA Basin and San Diego local areas to replace OTC units





Southern CA Local Areas: Existing OTC & SONGS



LA Basin and San Diego Local Areas are Affected by SONGS' Retirement





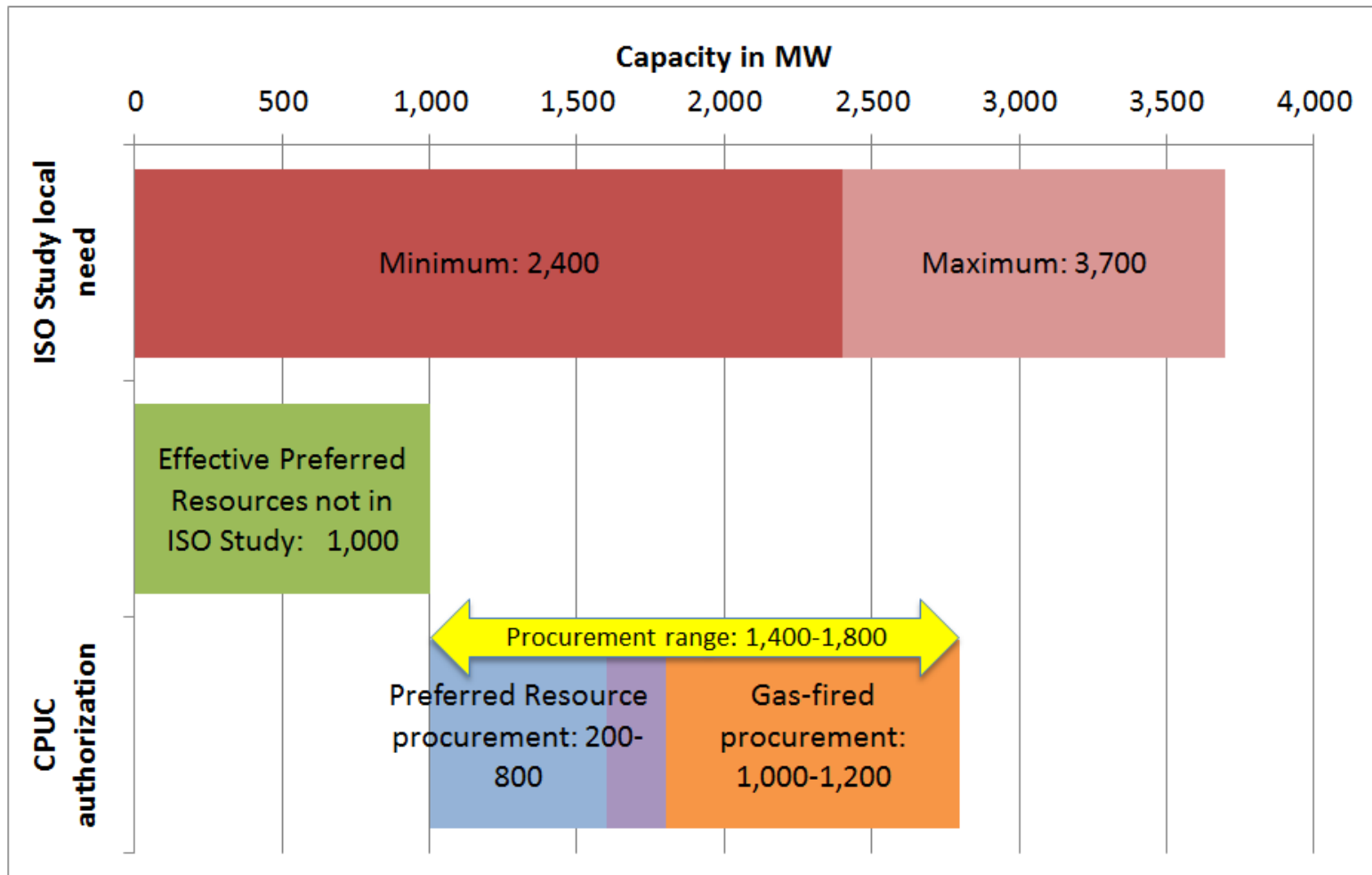
CPUC & OTC Replacement: LA Basin

- To address ~5000 MW of retiring OTC, the ISO studies identified 2400-3700 MW of need
- Analysis assumed SONGS online and did not include all preferred resources
- After accounting for preferred resources not included in the study, the CPUC authorized 1400-1800 MW of new resources
- Also authorized 215-290 MW in Big Creek/Ventura in same decision





50% of LA Basin Needs (with SONGS) Met with Preferred Resources





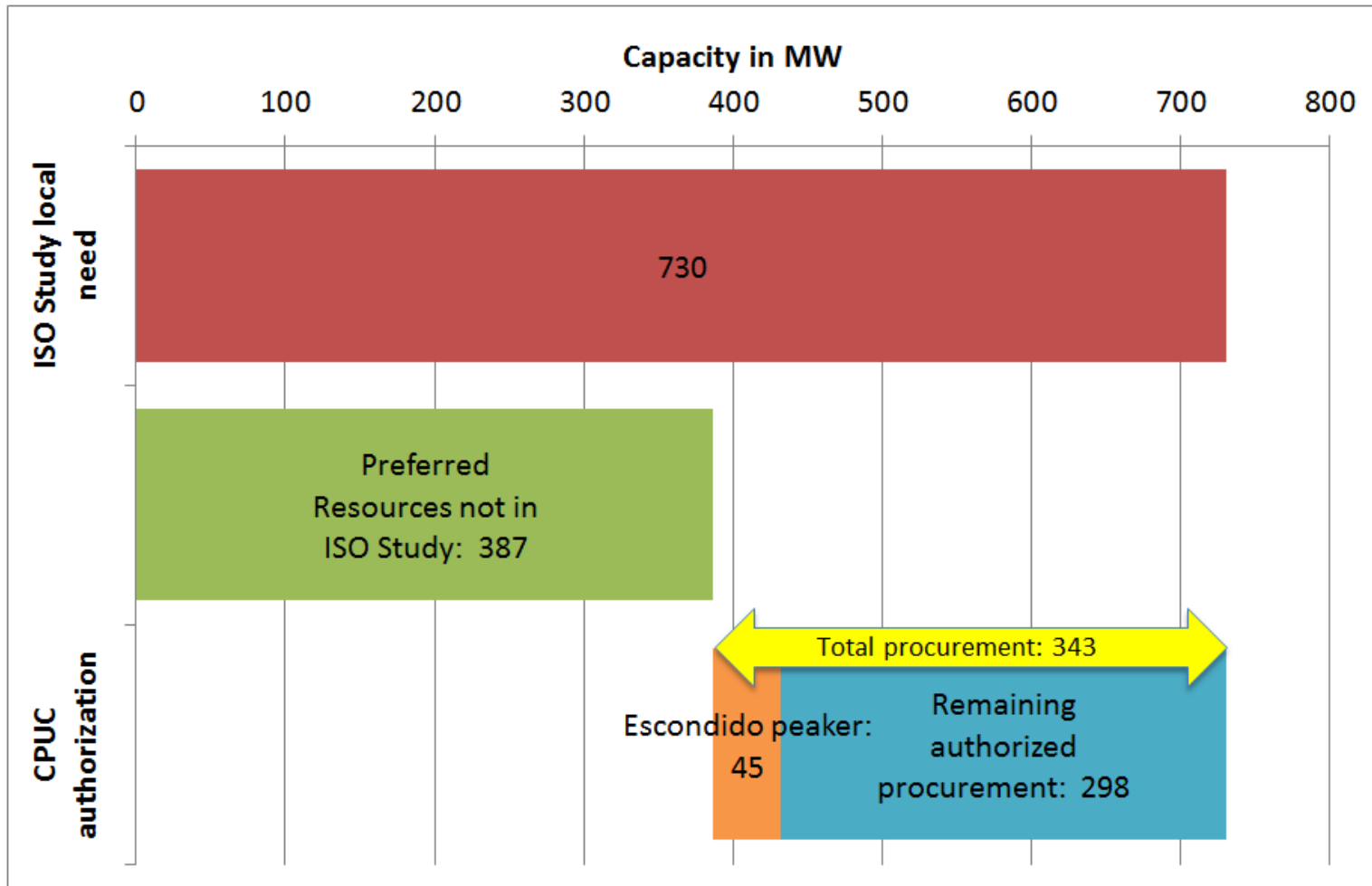
CPUC & OTC Replacement: San Diego

- ISO studies identified 730 MW of local area needs
- Analysis assumed SONGS online and did not include all preferred resources
- After accounting for preferred resources not included in the study, the CPUC authorized 343 MW to meet the remaining need





50% of San Diego Needs (with SONGS) Met with Preferred Resources





CPUC & SONGS Replacement

- LTPP is evaluating both local capacity needs in LA Basin and San Diego and system operational flexibility needs
- CPUC has asked ISO to model interim (2018) & long-term (2022) local reliability needs
- CPUC will need to balance resource capabilities with operational needs and GHG impacts
- Under current timelines, study results expected soon, with proposed decisions in late 2013/early 2014





Timeline of CPUC SONGS Analysis

- **Dec. 2012:** System planning assumptions adopted with "No SONGS" case
- **May 2013:** LTPP scope expanded to examine local area needs without SONGS
- **Aug. 2013:** Testimony expected for local area needs without SONGS
- **Sep. 2013:** Testimony expected for system needs without SONGS
- **Late 2013/Early 2014:** Proposed decisions expected on local area (Dec. 2013) and system (March 2014) needs without SONGS





Preferred Resources are a Key Part of the Solution

- CPUC procurement is guided by the Loading Order:
 - (1) energy efficiency (EE) and demand response (DR)
 - (2) renewable generation
 - (3) clean fossil-fueled generation
- Just as with OTC replacement, CPUC expects a significant portion of any needs from SONGS retirement can be met with preferred resources
- Requires balancing several factors: safety, reliability, ratepayer cost, and state environmental goals





Any SONGS Authorization Requires Balance of Operational Benefits

- Any resource authorization to replace SONGS must balance capabilities
- No single resource can meet both reliability needs and state policy objectives

Type	Annual Capacity Factor	Expected Availability On-Peak	Dispatchable	Inertia	Reactive power support (VARs)	GHG-free
Energy Efficiency[1]	Reduces total energy demand					Yes
Demand Response	Low [2]	100%	Yes	No	No	Yes
Combined Heat & Power	80%	100%	Maybe	Yes	Yes	No
Large Solar	24%	77%	No	No	No	Yes
Rooftop Solar	19%	45%	No	No	No	Yes
Wind	33%	30%	No	No	No [3]	Yes
Storage	N/A	100%	Yes	No	Maybe	Yes
Gas Peaker/CT	10%	100%	Yes	Yes	Yes	No
Gas Combined Cycle	65%	100%	Yes	Yes	Yes	No

[1] Energy efficiency is not traditionally measured as a capacity factor resource, and savings varies widely by application and use.

[2] Demand response programs generally have low capacity factors due to typical usage limits of 100 hours or less per year.

[3] Some renewable energy sources, notably wind, actually require additional VAR support.





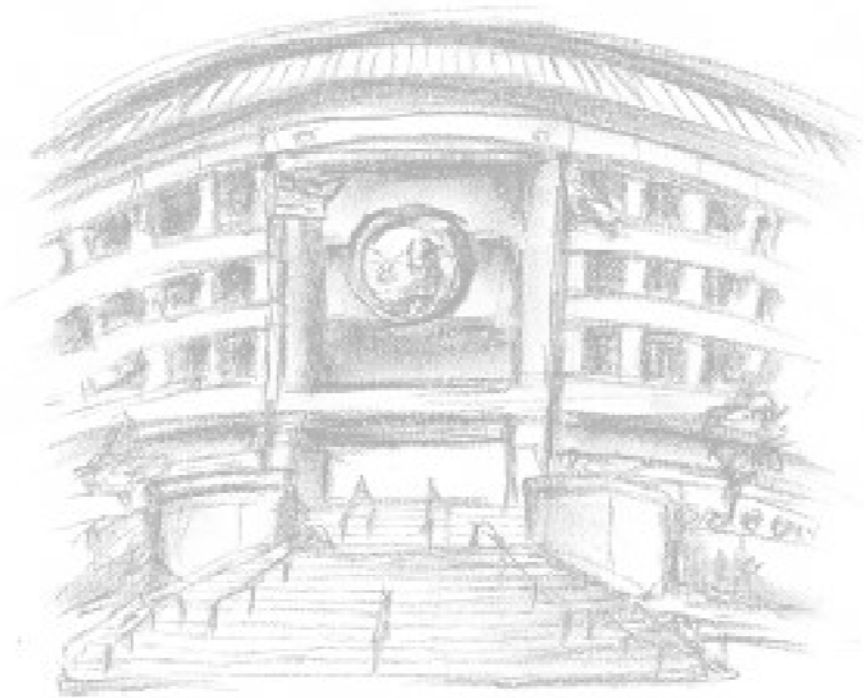
Looking Forward

- CPUC expects proposed decisions to authorize resources needed to maintain system and local reliability without SONGS in in late 2013/early 2014
- CPUC expects preferred resources to play a key role in meeting reliability needs
- CPUC looks forward to collaborating with the ISO, CEC, other state agencies and parties on SONGS replacement





Thank You!
For Additional Information:
www.cpuc.ca.gov





Appendix





2012 LTPP (R.) 12-03-014

LTPP Tracks	Decision	Objective/Outcome
Track I SCE Local Area Needs (LA Basin & Big Creek/Ventura)	D.13-02-015	Authorized 1400-1800 MW in LA Basin and 215-290 MW in Big Creek / Ventura.
Track II Operating Flexibility Needs	Expected March 2014	Examine future resource needs to maintain reliability. Focused on operational flexibility needs under 33% RPS.
Track III AB 57 "Bundled Procurement" Rules	Expected late 2013	Authorizes and approves any rule changes to IOU bundled procurement plans.
Track IV SONGS Replacement	Expected Dec 2013 (or Feb 2014 if hearings occur)	Determine resource needs in the LA Basin and San Diego without SONGS online.





1880 MW of LA Basin Resources Online in 2013

Note: The PPAs for the below generators were approved in 2008

Generator	MWs	Online Date
Sentinel	800	May 2013
Walnut Creek	500	April 2013
El Segundo	580	July 2013





2013 Authorizations To Date

- Total 2013 authorizations already made ranges from 1,958 – 2,433 MW
- CPUC expects resources authorized (or approved) in 2013 can be online before 2020

2012 LTPP Track I		
LA Basin	1400-1800 MW Total Authorized	
	1000-1200 MW	Conventional gas-fired
	≥ 50 MW	Energy storage
	≥ 150 MW	Preferred resources
	≤ add'l 600 MW	Preferred resources or energy storage
Big Creek/Ventura	215-290 MW Total Authorized	
SDG&E Application		
San Diego	343 MW Total Authorized	

